Fact Sheet

Predation Management Options

This factsheet will introduce predation control options for Saskatchewan livestock producers. It is intended to provide a brief description of some of the tools and techniques used in predation damage prevention and control. Additional information about guardian dogs can be found in the *Livestock Guardian Dogs* factsheet.

Techniques used to identify coyote predation of livestock are also discussed. Some of these control measures must only be utilized by specially trained staff. Contact Saskatchewan Environment and Resource Management (SERM) for further details and for any area-specific restrictions that may be in place for conservation efforts.

Signs of Predation

Determining the cause of an animal's death is not always easy. You must often determine whether an animal was killed by a predator or died from other causes and was later eaten by a scavenger. The single most important evidence of predation is hemorrhage (bleeding) and bruises. An animal will only hemorrhage or bruise when it is alive or for a very short time after death. Table 1 outlines some indicators that can be used to distinguish between coyote and domestic-dog attacks.

The kill location can assist officers in determining the time predation is occurring. If sheep are known to leave a bedding area at 5:00 am and a carcass is found close to the bedding area, then efforts to shoot coyotes should be done around 5:00 am. Livestock killed further from the bedding area indicates that a predator is coming from further away and hunting should be conducted later in the day.

A. Calling Equipment

A variety of devices are available which attract predators by producing sounds like the distress calls of various prey species. Novice hunters can easily master the art of predator calling by accompanying and learning from experienced callers or by viewing any of the numerous videotapes currently available on the market.

Table 1: Differences between coyote and domestic dog attacks on livestock.

Coyotes	Domestic/Feral Dogs
foam in trachea indicates death by suffocation	usually no sign of feeding on the carcass
presence of tooth punctures in the throat area	mutilation is present on numerous parts of the carcass
95% of coyote kills will target the throat and neck of lambs	herds will show nervousness. Cattle become very skittish
no sign of any mutilation	more than one animal may be injured or killed
herds are usually calm	
usually one kill at a time	
carcass is consumed, organs usually eaten first	

Electronic Calling Machines

These devices consist of a miniature tape player, battery, speaker and a prerecorded cassette tape of animal distress sounds. Electronic calling machines offer several advantages over manual callers. They can use a variety of prerecorded tapes; offer greater volume control and can be positioned some distance from the hunter. Two disadvantages are weight and expense. To assist producers with livestock predation problems, Saskatchewan Environment and Resource Management (SERM) has purchased several electronic callers that are available for loan through local offices. These devices are the preferred calling option over mouth calls for a novice hunter.

Manually Operated Calling Equipment (mouth calls)

Small, light and inexpensive, these devices can be as effective as electronic calls but have some drawbacks. Mouth calls generally have less volume and therefore a reduced effective range compared to electronic callers. Mouth calls with metal reeds may freeze up in extremely cold temperatures. Predators will stalk hunters using mouth calls, so extra care is required. Some ways to avoid being seen by a stalking predator include:

- wearing camouflage clothing
- moving as little as possible, calling in short sequences and stopping calling when predators are in sight,
- and using a second hunter to do the shooting positioned 50 to 100 metres away from the caller.

Calling Sites and Setup

The best sites are those areas with lots of open terrain and scattered patches of brush. Calling locations should offer a clear view of the area while providing adequate cover for the hunter. The calling machine should be hidden in brush or tall grass.

Tip - Watch the direction which magpies come from when attracted by the caller because predators, especially coyotes, often approach and investigate from the same direction.

Clothing

Camouflage clothing and facemask are recommended in colours and patterns matching the season and surroundings. Firearms need not be camouflaged.

Positioning

In order to observe predators approaching from farther distances and allow ample time to prepare for a shot, hunters should take high vantage points whenever possible. Hunters should take care to blend with the surroundings and choose locations with good visibility.

Communication

Working with a partner is recommended to reduce the need to move and to increase the terrain that can be observed. Purchasing inexpensive voice-activated headsets can provide effective hands-free communication with your partner and increase hunting success.

Wind

To reduce the chance of your scent being detected, calling should always be done against the wind. However, winds greater than 15 km/hr. may force hunters to call downwind for better success.

Calling Sequence

Predators, especially coyotes, may arrive in a few minutes on days with light winds. They may take more time (10 to 15 minutes) when coming from long distances. The following calling sequences should be followed to maximize calling success:

- For coyotes - 12 to 15 minutes utilizing tapes of rodent squeals, jackrabbit, deer fawn, lamb or coyote pup in distress.
- For wolves - 30 to 45 minutes of deer fawn, jackrabbit/snowshoe hare or coyote pup in distress.

- For cougars - 30 to 45 minutes of deer fawn or jackrabbit in distress or cougar in heat.

Vehicles

Approach calling areas quietly at speeds under 50 km/hr. Do not slam vehicle doors and make sure that the vehicle can not be detected by approaching predators. Whenever possible, park downwind and walk for five to 10 minutes to the calling location.

B. Snaring

The use of free-hanging neck snares has become one of the most effective methods in capturing predators especially coyotes. Snares offer several advantages over steel foothold traps: they are light weight, compact, simple in function, affected little by weather, easy to set, low in cost, and offer a high degree of human safety. Studies have shown that snares were ten times more selective over steel foothold traps for targeting predators and single bait sets have been known to take as many as fifty coyotes during a six-week period.

Producers who have experienced livestock predation can contact their local SERM office for information on acquiring neck snares. To assure that the snares are designed to release non-target species such as deer, only SERM approved neck snares will be allowed for use under a special permit. Winter bait sites will provide the best snaring opportunity; however, snares can successfully be used at any time of the year.

Preparation of Snares

Snares can be treated and de-scented if desired, but field use has shown that snares will work effectively even without de-scenting them. If snares are to be treated, place a dozen snares in a bucket of boiling water mixed with four tablespoons of baking soda for one hour. The snares will turn a dull grey after being removed and should be hung-up to dry outdoors.

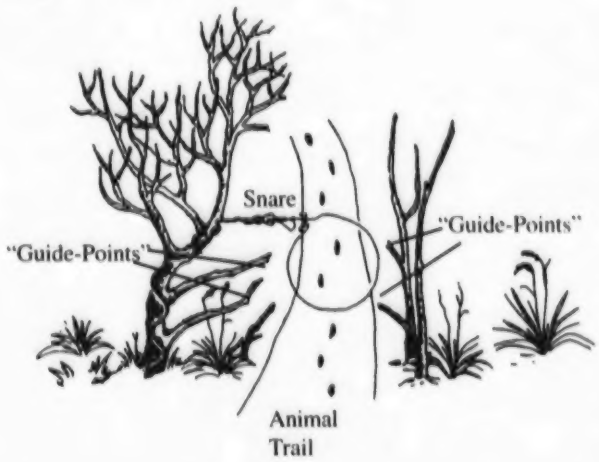
Snare Set Locations

Snares should be set on known predator trails. In most instances coyotes and wolves will heavily travel trails made by livestock. It is strongly recommended that pastures that do not contain livestock be selected as snaring locations. Some of the best snare locations are heavily brushed areas that contain cattle paths or other animal trails.

Alternate snare locations can be made utilizing fencelines, vehicle trails, game trails crossing fencelines or actual predator trails.

Figure 1 shows an example tree snare setup that utilizes natural obstacles or "Guide Points" to direct coyotes to the center of the snare.

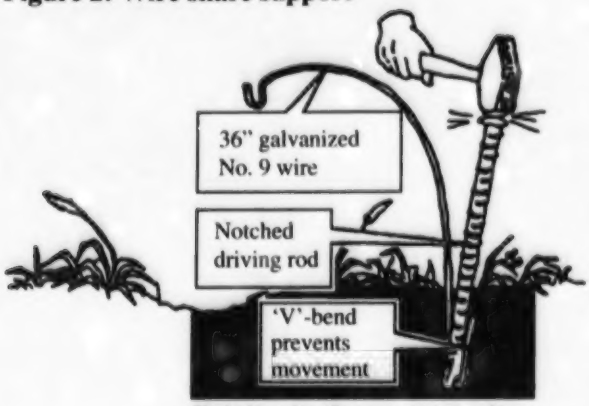
Figure 1: Tree snare support



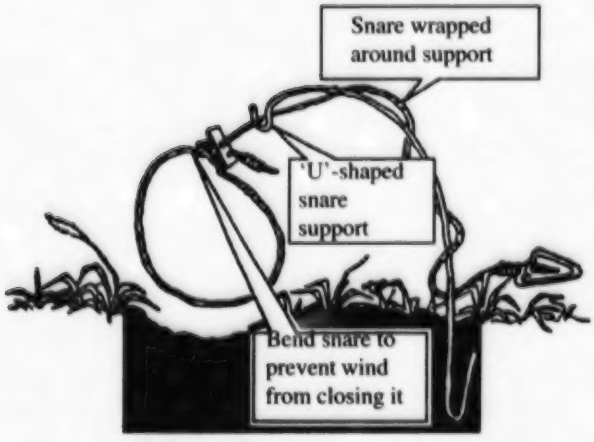
Supporting Snares

There are various methods of supporting neck snares. One method is to cut a piece of 12 gauge haywire approximately 1.3 metres (4ft) long. Wrap one end of the wire securely to a tree beside the trail. Pass the other wire end through the swivel of the snare and bend the wire back on itself and make approximately three to four tight loops. Leave yourself at least 30 cm. (12") of wire extending out past the swivel. The snare cable can now be wrapped around the support wire three times in order to obtain the required support. This method is shown in Figure 2.

Figure 2: Wire snare support



Driving in the support wire



Setting the snare

Another snare support can be made from a 0.9 metre (36") piece of 12-gauge galvanized or 9-gauge soft wire. This method is shown in Figure 2. Form a 'V'-bend in the support wire about 10 cm. (4") from the end and drive the wire into the ground with a notched rod to prevent the support from moving in the wind. Wrap the snare around the support about three times and hold it in place with a 'U'-bend formed in the upper end of the support. Snares should always be attached to solid anchors such as trees or steel rods made of 1.3 cm. (½") rebar approximately 72 cm. (30") long.

Snare Loop Sizes

Snare loop sizes must be properly adjusted to capture the intended predator species. As well as the loop sizes, snares must be correctly positioned above the ground (Figure 3).

Carcass Pile Bait Station

During winter months when predators must hunt longer periods for food, they can be drawn into heavy cover with baits like carcasses of livestock or road-killed big game. Carcass baits should be placed in the middle of heavy brush patches that have numerous trails leading into them. Snares should be set approximately 27-45 metres (30-50 yards) away from the bait site (Figure 4).

C. Trapping

Trapping is a very selective technique useful in almost any predation situation. With proper instruction, most landowners can become proficient enough to trap problem predators on their land. Predators normally follow roadways, trails, field edges and fencelines. Trap set locations should be concentrated along these areas. Traps should be routinely checked throughout the duration of the trapping period (minimum of once daily)

* **IMPORTANT**: conventional leg-hold traps will be banned as of April 1, 2001. Only leg hold traps with offset or padded jaws may be allowed after this date.

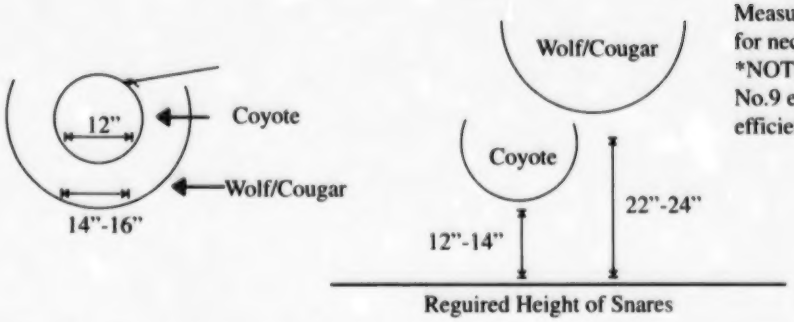
Recommended Trap Sizes

- Coyotes - #3 or #4 coil spring traps with padded or offset jaws
- Wolves / Cougars - #MB-750 with offset jaws, Alaskan, Braun or #4½ Newhouse traps (coil spring preferred)

Trap Preparation

Traps should always be treated and dyed prior to using. Trap dying prevents rusting and removes oils and other human scents. Commercial dyes can be obtained from any trapping equipment supplier. Whenever traps are purchased, they should always be tested to ensure that the pan is level when set.

Figure 3: Snare loop sizes and placement height.

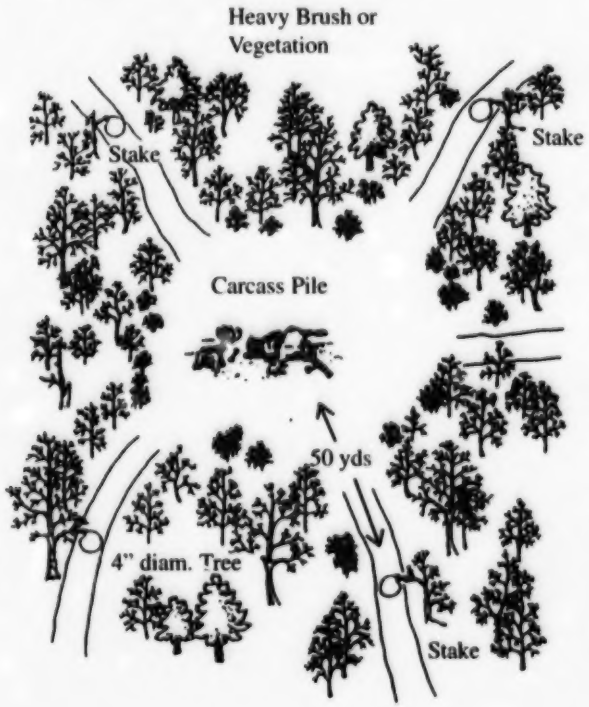


Measure from bottom of loop to the ground for neck snare.
*NOTE: Only attach snares to stakes with No.9 extension cables. Wire does not work efficiently from stakes.

Trap pans that are either too high or too low can result in poor or missed catches.

Trap pans can be adjusted by either bending the trigger assembly closer or further away from the pan. Bending the trigger assembly towards the pan will raise it while bending the assembly away from the pan will lower it. Adjustments should be made using either a hammer or pliers. Traps should be adjusted prior to being dyed and once treated, they should only be handled with clean rubber gloves.

Figure 4: Carcass pile bait station.



Trap Handling

Whenever traps have been dyed, care should be maintained so as not to contaminate them with human scents. Always use clean rubber gloves when handling traps. The use of rubber pants and boots will further reduce the amount of scent left at a set location. Traps should be stored separately when transported so they don't become contaminated by fuel, bait or lure attractants.

Stakes and Drags

Traps should always be anchored securely. Stakes or drags should be strong enough to hold predators once caught. Drags can often be made of heavy objects found at the trapping site, such as logs or rocks. Commercially made steel grapple hooks can also be used when trapping in forested areas. Drags or grapples can be used effectively when snow cover is present. If metal stakes are used, ensure that they are long enough and cannot be pulled out from the ground. Stakes should be placed directly under traps whenever possible.

Traps should be anchored as outlined in Table 2.

Trap Concealment

Proper trap concealment will determine trapping success. Once trap locations have been determined, dig a shallow depression slightly larger than the trap being used and deep enough so that when set, the top of the trap is below the surrounding ground level. This depression must have a level base so that the traps will not move when predators step on them. Trap pans should be covered with screening,

wax paper, white polyester sheeting or paper toweling. Ensure that enough material covers the entire inside area of the trap jaws. This method eliminates any dirt from falling underneath the pan that might cause the trap to fail. Position traps so that the springs face the same travel direction of approaching predators. This will ensure that the predator is caught by the entire foot and not by the toes, which may lead to escapes. Trap pan tension should be adjusted so as to release only when the proper weight is applied. To increase proper pan tension, place polyester fiberfill or crushed plastic underneath the pan. This will increase the amount of weight required to depress the pan. Carefully sift dry dirt or place leaves over the entire trap surface, ensuring the set remains flat. Grass may be scattered over loose dirt to further camouflage a trap set in pasture situations. The finished trap set should be level and slightly lower than the surround soil creating a slight depression. Brush away any footprints when leaving the set.

Trap sets should be inspected at a distance or from your vehicle each morning during the trapping period. If problem predators are caught and the site is to be reused, it is important to clean and dispose of any blood from the site. Traps may have to be reset with dry dirt after a heavy rain.

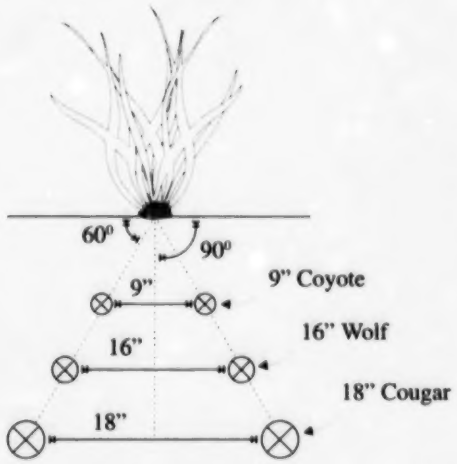
Lures, Baits and Scents

Predators are always attracted to food odours or scents. Many commercial baits, lures and urine are available and should be used around sets. These make the predator concentrate on the odour, rather than on your traps. Remember to use attractants specifically designed for the predators you are trying to capture. Lures, baits or scents are usually applied to clumps of grass, rocks, stumps or into natural or artificially made holes.

Trap Spacing Requirements

Figure 5 shows the correct spacing and distance required to properly capture coyotes, wolves and cougar. Traps should be placed at 60° angles in front of any bait, lures or scent attractant placed against backing.

Figure 5: Trap spacing requirements.



Trapping Sets That Work

The following trap sets have been included due to their high success rate in capturing coyotes, wolves and cougars. Remember to use prevailing winds to your advantage when making these sets.

Table 2: Recommended trap anchoring.

	Chain length (using stakes)	Chain length (using steel grapples or drags)	Stake Length	Drag Weight
Coyote	as provided with swivel	1.5 m (5 ft.)	*45-60 cm. (18-24")	27 kg (60 lbs.)
Wolf	0.6-1.2 m (2-4 ft.)	1.2-1.8 m (4-6 ft.)	*0.6-09 m (2-3 ft.)	90 kg. (200 lbs.)
Cougar	1.2 m (4 ft.)	Not recommended	*0.6-0.9 m (2-3 ft.)	90 kg. (200 lbs.)

NOTE: Stakes should be made of 13 mm (1/2 in) rebar

Scent Free Coyote Set

Use this set along fencelines, livestock paths, cultivated fields or dirt roads. Using a six-inch auger, bore a hole 30 cm. (12") deep, preferably on the downwind side of a clump of grass. This will encourage predators to approach the set on the trap side. If no natural backings are available, provide your own. Old cow skulls, stumps or rocks provide good backings. Place some bait (fish, fowl or meat scraps) in the bottom of the hole. Insert a 10 cm. (4") diameter post on top of the bait and lean the post away from the backing to act as a 'plug'. Fill the hole with dirt and pack firmly. Set a trap on the downwind side of the post, approximately 22 cm. (9") away. Brush away any footprints and let the set weather for several days. When you want the set to be operational, drive beside the set with your vehicle, lean out and wiggle the 'plug' post out of the hole. You now have a set free of human scent. Check your sets from a distance and avoid leaving human sign in the area.

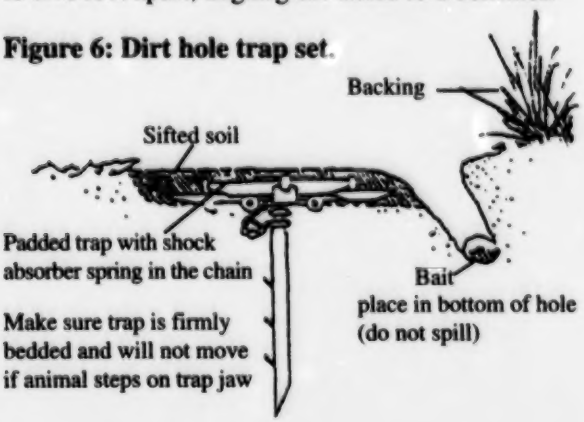
Dirt Hole Set

Similar to the previous set, but made by using a small hand trowel (Figure 6). Dig a 5-7 cm. (2-3") hole on a 60° angle in front of a prominent backing (grass clump, mound, rock, or stump). The hole should be at least 30 cm. (12") deep. Trap should be placed on the downwind side. Place bait into the hole and cover with some grass. Place scent lure or attractant sparingly on top of prominent backing.

Three Hole Coyote Set

Dig three holes with a small turf spade, about four to five feet apart, angling the holes to a common center forming a triangle. Pile excavated dirt in the center of the triangle to create a low mound. Two of the holes should be large 20-30 cm. (8-12") in diameter, resembling animal burrows. The third hole can be smaller for the sake of variety. All holes should be approximately 45 cm. (18") deep and angled under the dirt pile.

Figure 6: Dirt hole trap set.


Backing
Sifted soil
Padded trap with shock absorber spring in the chain
Make sure trap is firmly bedded and will not move if animal steps on trap jaw
Bait
place in bottom of hole (do not spill)

The holes should then be baited with three different baits. A successful trio is beaver, skunk and duck or chicken carcass remains. All bait should be covered slightly with grass to avoid attracting predatory birds. Place traps approximately 15 cm. (6") into the holes. Traps should remain level or slightly below the bottom of the trench. A fourth trap should be placed on top of the mound in the center. Feathers and/or fox urine may be sprinkled on top of the dirt mound as an added attractant. Double catches are common at this set.

Wolf Urine Post Set

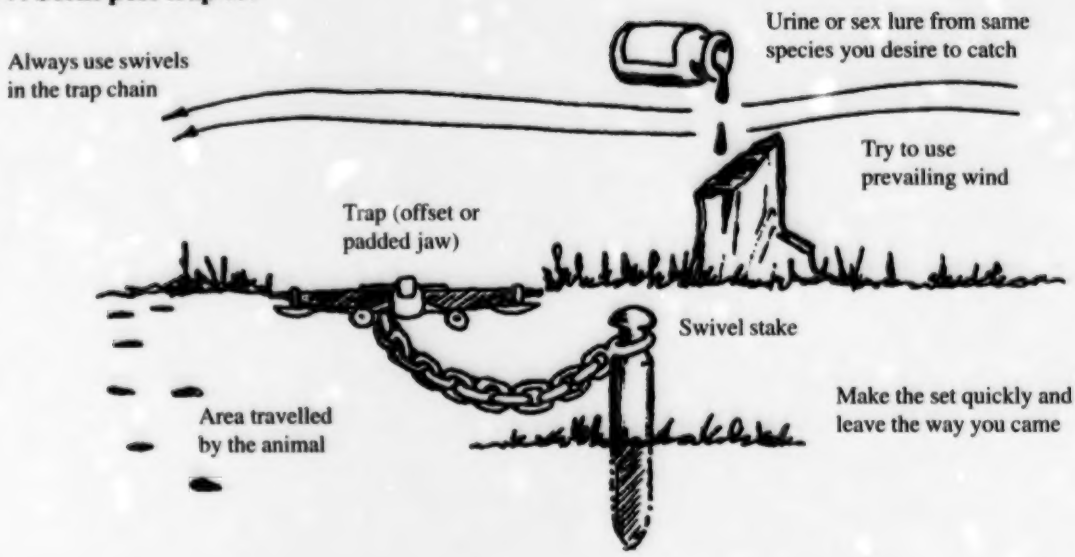
One of the most successful wolf sets is the urine or scent post set (Figure 7). It is the nature of the wild to urinate on any prominent object at the side of trails or along a fenceline. Traps may be camouflaged in front of these scent posts. During winter months cover the trap with paper towel as a minimal amount of snow is required to cover the trap. When snow is not present, cover the trap with sifted dirt or leaves. Ensure the trap(s) create a slight depression and that the surface of the trap is flat.

Let the wolf be your guide to trap placement. It should be obvious where the wolf stood at the post. If no scent posts are available, you can make your own by sprinkling fox or coyote urine or a clump of grass, prominent stump or mound of snow along the edge of a trail or fenceline. An effective twist is to import frozen wolf urine from other areas to attract resident wolves.

Deep Snow Wolf Set

Locate a trail commonly used by wolves on their regular territorial circuit. Approach these trails at right angles to minimize human scent left at the site. Disturb snow and vegetation as little as possible.

Figure 7: Scent post trap set

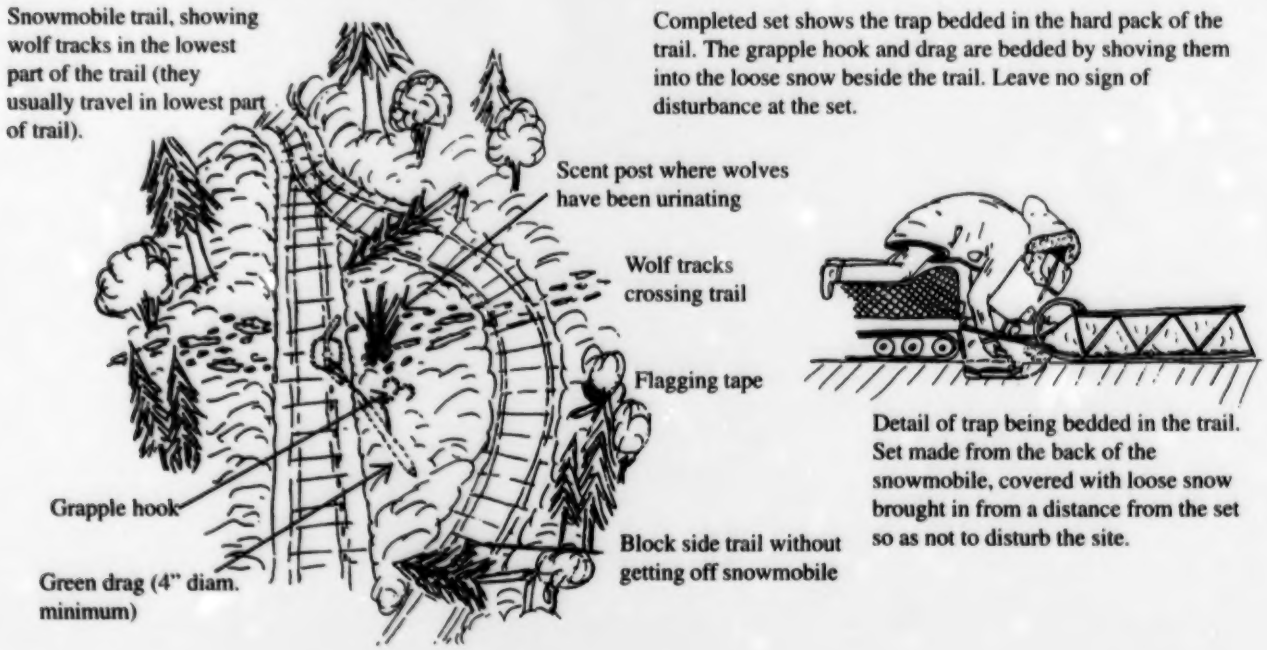

Urine or sex lure from same species you desire to catch
Always use swivels in the trap chain
Try to use prevailing wind
Trap (offset or padded jaw)
Swivel stake
Make the set quickly and leave the way you came
Area travelled by the animal

Gently dig beneath a track with a scoop or trowel. Throw excavated snow away, but neatly though. Slide a trap under the track. The trap should be equipped with extension chain and grapple that is camouflaged away from the trail. Back away from the set covering up your presence by throwing fluffy surface snow over your footprints. Be patient! Wolves return to an area every eight to fourteen days.

Snowmobile Trail Wolf Set

Wolves will often follow a skidoo trail during deep snow conditions. Working from a sleigh towed by your snowmobile, dig a trap bed in your skidoo track, preferably in a low spot in the trail (Figure 8). Your trap should have the extension chain and drag hidden beside the trail in the deeper snow. Sift hardened snow over the trap. Erase all signs of

Figure 8: Snowmobile trail trap set


Snowmobile trail, showing wolf tracks in the lowest part of the trail (they usually travel in lowest part of trail).
Completed set shows the trap bedded in the hard pack of the trail. The grapple hook and drag are bedded by shoving them into the loose snow beside the trail. Leave no sign of disturbance at the set.
Scent post where wolves have been urinating
Wolf tracks crossing trail
Flagging tape
Grapple hook
Block side trail without getting off snowmobile
Green drag (4" diam. minimum)
Detail of trap being bedded in the trail. Set made from the back of the snowmobile, covered with loose snow brought in from a distance from the set so as not to disturb the site.

unnatural disturbance and gently accelerate your snowmobile away from the set area.

A variation of this set is to plant slender willows at an angle in the trail on either side of the trap. This directs the wolf to step squarely on the trap pan. As well, a day stock scented with wolf or coyote lure may be stuck at the side of the trail near the trap. This will distract the wolf, causing him to step around in your set area, thereby increasing the chance of a successful catch. Upon returning, make a detour around the set. Wolves will usually follow the straight trail.

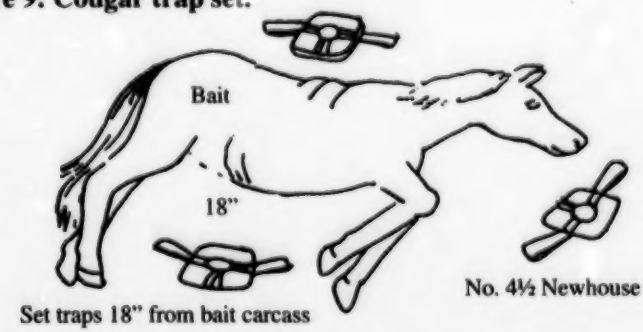
Wolf Summer Set

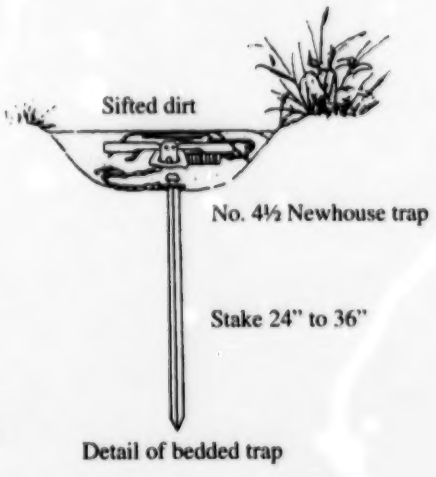
In an open grassy area, set and camouflage four to six traps in a rough circle approximately 5 metres (16 feet) in diameter. Inside the circle, make several mouse size holes 5-7 cm. (2-3") deep with a stake. Let the area weather for a couple of days to dissipate any scent you may have left. Now enter the set circle and put a variety of lures in your mouse holes. If you do not have access to lures, use bits of fat, cheese or cooked meat scraps. These items will hold their appeal longer in warm weather than raw product. As a final attractant, scatter a pail of feathers from chickens, ducks, etc. over the entire set area. Leave the same way you entered. Check the set from a distance after this.

Cougar Carcass Set

The most effective way to capture cougars quickly is with the use of experienced dogs; however, if traps are used, they should be placed near the predated carcass site. Traps must be well anchored at all times. Figure 9 outlines the recommended trap placement for cougars.

Figure 9: Cougar trap set.





D. Stalling / Scaring Devices

Scaring devices are useful in reducing the occurrences of livestock predation for short periods of time. The use of these devices will reduce the potential for further losses until a more permanent solution can be found. The effectiveness of stalling devices improves by varying their position, appearance and length of time used or by using a combination of different devices.

Lights

Mercury vapour lights situated above corrals can reduce livestock predation. When predation occurs and lighted corrals are available, livestock should be moved into these facilities each night. Another advantage of lighted corrals is that predators become more vulnerable when they enter the lighted area. Coyotes often establish a fairly predictable pattern of killing. When this occurs it is possible for a producer to wait above or downwind of the corral and shoot predators as they approach.

Radios

Radios left in a pasture can also reduce predation. Radios should be tuned to an all night station and moved to a new location in the pasture each day. They should be turned on prior to darkness and turned off at daybreak.

Vehicles

Parking vehicles in the area where losses are occurring often temporarily reduces predation. The effectiveness can further be improved or extended by frequently moving the vehicle to a new location. Often producers place a replica of a person or scarecrow in the vehicle when losses are occurring during the daylight hours. If predators continue to kill with vehicles in place, the vehicle can serve as a blind in which to wait for offending predators.

Propane Scare Cannons

Propane cannons produce loud explosions at timed intervals when a spark ignites a measured amount of propane gas. Cannons should be moved on a daily basis and regulated to fire every 10-15 minutes. Cannons should be turned on just before dark and off at daybreak unless predators are killing during daylight hours. Scare cannons are available for loan from at any SERM office.

Scarecrows

Scarecrows made of clothing or plastic bags can also reduce losses over the short term. Scarecrows should be moved on a daily basis to improve their effectiveness.

Strobe Lights and Sirens

A scaring device known as the Electronic Guard (EG) can be very effective. The EG consists of a strobe light and siren controlled by a variable interval timer that is activated at night with a photoelectric cell. Tests conducted using the EG in fenced pastures show that predation can be reduced as much as 89 per cent.

Use of EG in Fenced Pastures

1) Place the EG on top of fence posts, T-posts or hung in trees.
2) Place the EG in open areas, but avoid shady spots at all times.
3) Two units should be used in small pastures (8-12 ha.). Three to four units should be used in larger pastures (16-40 ha.), hilly or wooded areas.
4) EG devices are ineffective in pastures over 40 ha. in size.
5) If pasture size exceeds 40 ha. or terrain becomes a problem, place the EG close to livestock bedding areas.
6) EG devices should be moved every 10 to 14 days.

E. Fencing

Predator-Resistant Fencing:

Fences can be constructed to exclude predators; however, due to the persistence and intelligence of many predators, the longevity of such fences cannot be guaranteed or predicted. Fence construction can be costly and time-consuming. Effective fences would need to be sufficiently high to prevent jumping over and have an "apron" to discourage digging under. Predator resistant fencing is a necessity for confinement practices (secure corrals etc.). Another type of fencing is drift fencing. Drift fencing is intended to redirect predator movements away from sheep pens.

Electric Fencing:

Electric fencing is costly and may not be entirely effective in excluding predators. Predators are highly adaptable and have been known to breach electrified fencing without many problems. Problems with grounding out and a reliable power supply make relying solely on electric fencing a risky proposition.

F. Shooting

A producer experiencing livestock predation may shoot problem animals on his land at anytime of the year. Protected wildlife such as cougars and wolves will remain the property of Saskatchewan Environment and Resource Management (SERM). If a wolf or cougar is destroyed, the producer must immediately contact his local conservation officer. Problem coyotes that are destroyed do not have to be reported.

Recommended Firearms

High-powered rifles are recommended for predator control, due to their better stopping power and the fact that the shot distance can range from very close to three or four hundred metres. If the pelts are to be salvaged, full metal-jacketed ammunition or ammunition designed to not exit the carcass is recommended.

Den Hunting

Locating Dens

Usually done from late April through July, the primary purpose of den hunting is to stop adults from killing livestock to feed pups. Dens are often located along the edge of a coulee or on southern exposure hillsides within three kilometres of a kill site and within 200 to 400 metres of a water source. Inhabited for about one and a half months, dens are usually 2.4 to 3.0 metres long with one entrance. Bones, feathers and droppings mark an active den. Since pups look for grubs under cow chips, flipped chips indicate pups may be in the area. Again, if a den is approached, it is important to be prepared to destroy the animals in it or they will move once discovered. Three gas cartridges placed fuse down in the hole and sealed with dirt and/or a piece of plywood should ensure the predator coyotes do not survive. Research has shown removing adults and pups almost entirely eliminates predation, while removing pups alone reduces predation by about 90 per cent.

Electronic calling devices purchased by SERM to assist producers in attracting predators can be used to locate coyote dens. Following the advice for calling in general, coyote howling tapes will aid in pinpointing coyote dens because coyotes with pups usually respond to howling. Once a den is approached, every effort should be made to destroy both adults and pups by shooting or with chemical gas cartridges (available from most SERM offices). Adults should be destroyed first or they may quickly move the pups. If one adult is away hunting, the coyote pup in distress call or coyote challenge tape played some distance from the den may be used effectively. It is not uncommon to find two females in a den with up to 15 pups. The best time to locate dens is in the early morning or just before dark when coyotes are most active.

Aerial Hunting

In the past, hunting problem predators by use of aircraft has only been allowed under a special permit issued by SERM. Aerial hunting is not recommended because of the special skills required of both pilot and gunner and the associated dangers inherent with low-level flight.

Unless all other control methods have failed, aerial hunting should be considered only as a last option.

Snowmobile Permits

Snowmobiles used to pursue predators should also be considered as a last option solution. If all other predator control methods have failed, SERM offices may issue permits to allow producers to pursue and shoot problem predators. Absolutely no firearms may be carried loaded or discharged from the vehicle, and predators may not be injured or destroyed by use of the vehicle alone.

G. Control with 1080

What is Compound 1080?

Compound 1080 (sodium monofluoroacetate) is used as a chemical control for problem coyotes and other canines. Canine species are highly affected by 1080 because, unlike many other species, they have an unusually low tolerance to its effects. This characteristic allows 1080 to be considered specific to canine species with little risk of secondary poisoning.

How is 1080 used?

Compound 1080 is an effective and safe method of chemical control within a responsible predator management program. Non-target animals are protected by the chemical nature of the product, the type of lure used, season of baiting and the manner in which the bait is exposed in the field.

Toxicity

Compound 1080 is not a "super-poison"; however, it is very effective against canines due to their unusually low tolerance towards it. Because of this low tolerance, the amounts needed to affect canines are also very low. Other wildlife would have to consume extremely large doses at one time to be affected which is physically improbable. People have a much higher tolerance and need to consume at least 6 times the canine amount before the possibility of poisoning occurs. Other common household products such as cleaners and solvents are potentially more toxic to people and animals if misused.

It should be noted that, because 1080 is highly toxic to canines, precautions must be taken to protect canine-related non-target species such as pet dogs, guardian dogs and foxes. It has been documented in studies that domestic dogs are more susceptible to 1080 poisoning than coyotes.

Environmental Concerns

A challenge associated with any toxic compounds is the potential to affect other animals in the food chain. Levels of 1080 do not accumulate within an animal's body, nor can an animal build resistance. If a sub-lethal dose is consumed, it is fully metabolized with no residuals remaining. Due to the low levels needed to affect canines, it is physically improbable for other scavenging species to eat enough tainted meat to be effected.

Compound 1080 will not persist in soil or plants if accidentally leached out or spilled onto the ground due to dilution and bacterial action. There is little threat posed to fish and amphibians because of dilution and these species have shown the greatest tolerance for 1080 in laboratory trials.

SERM will be responsible for the administration and application of 1080. SERM staff that have been certified in handling chemical control agents, will consider using it only after a producer has experienced livestock loss and no other practical alternative control measures have been successful.

Compound 1080 will not be used as a winter bait for coyote population control. There may also be further restrictions applied to the use of compound 1080 in areas of southwestern Saskatchewan that have populations of swift fox. Other conservation efforts may also influence the application of 1080 as a predation control measure.

When administered, the compound will be placed in tablet form around the carcass in small prepared baits. The use of poison in this manner will specifically target and remove predators when they return to feed on the carcass. Producers experiencing predation are encouraged not to move or disturb the carcass from the original kill site. The effective use of 1080 is greatly reduced when the kill site has been disturbed. Landowners are requested to contact their local SERM office whenever livestock predation occurs.

Further Information

For further information, contact your local extension agrologist, farm management agrologist or Rural Service Center.

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